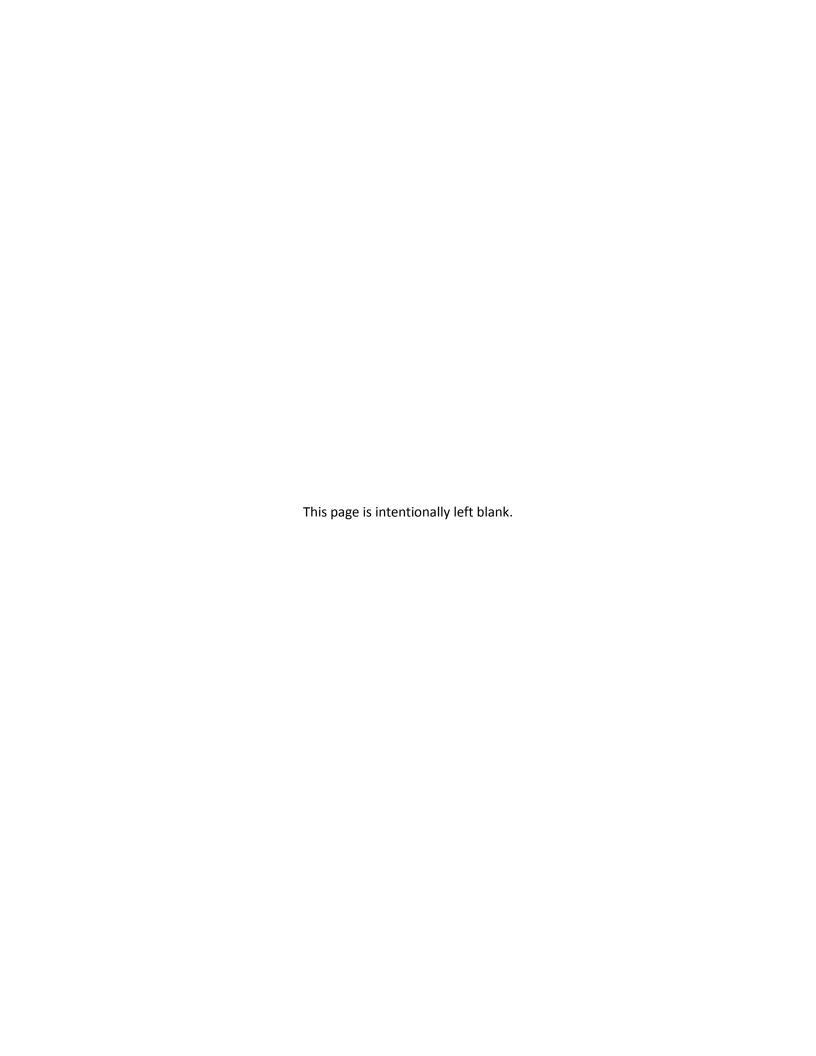# ENABLING COMMUNITY HEALTH RESILIENCE

The Community Health Resilience Toolset Guidance Document
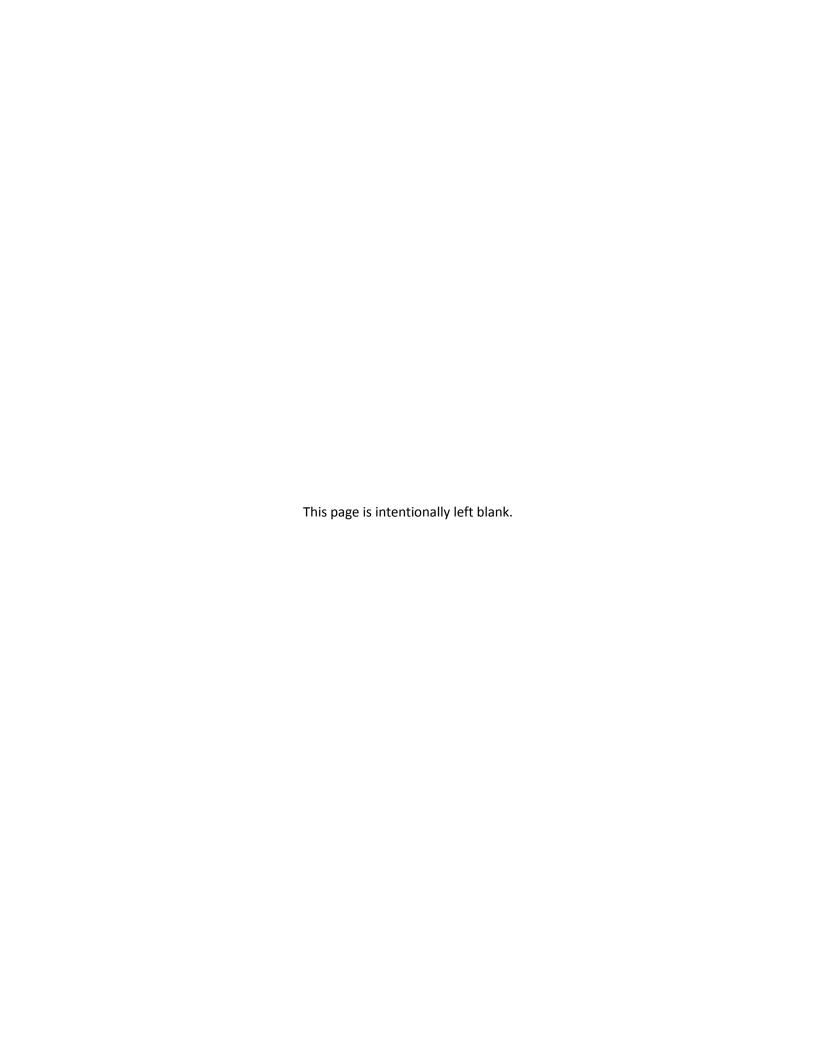
Fourth DRAFT

THE U.S. DEPARTMENT OF HOMELAND SECURITY
OFFICE OF HEALTH AFFAIRS

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Contents

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The Importance of Community Health Resilience

Community Resilience, and particularly *Community Health Resilience* (CHR), has emerged as a priority goal from the national to local level based on growing awareness that the individuals, organizations, neighborhoods, and infrastructure underpinning a community must be prepared to return to functionality and prosperity quickly after a disaster or other major adversity. The need for building resilient communities is clearly demonstrated by the magnitude of health-related consequences of significant disasters over the last several years—Superstorm Sandy; the Joplin, Missouri, and Tuscaloosa, Alabama, tornados; and the Japanese earthquake and tsunami. Other motivating concerns include threats with the potential for substantial damage and long-term disruption of infrastructure and other essential services and the community at large, including technological disasters, deteriorating and aging infrastructures, cyber and unconventional terrorist attacks, and climate change. Addressing climate change-related hazards in particular has emerged as a key national resilience priority.[1] These hazards include rising sea levels; extreme weather events, including more frequent and intense hurricanes and other storms; coastal surge and flooding; droughts; heat waves; and wildfires; and increased vector-borne diseases. Potential climate change impacts have demonstrated that to be prepared, communities across the country must plan differently for a new and more uncertain reality. Regardless of the event, a community's ability to successfully return to a "new normal" is based on its *resilience*, or its capacity to withstand, respond positively to, adapt, and recover expeditiously from a crisis or adversity. To date, there is no single-definition accepted for community resilience as well as CHR—which is the aspect of overall resilience that addresses human physical, behavioral, and societal health and wellbeing. In addition, the term *resilience* has different meanings depending on the professional function or discipline (e.g., sociologists, engineers, or emergency managers). Although there is no agreed definition, there are useful descriptions of both community resilience and CHR.

The 2013 U.S. Presidential Policy Directive on Critical Infrastructure Security and Resilience[2] defines resilience as:

The ability to prepare for and adapt to changing conditions and withstand and recover rapidly from disruptions, including deliberate attacks, accidents, or natural occurring threats and incidents.

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[1] President Obama issued a Climate Action Plan in June 2013 followed by an Executive Order in November 2013 creating a Task Force on Climate Preparedness and Resilience of State, local, and tribal officials. In July 2014, the President announced a $1 billion initiative to help communities undertake climate change resilience improvements.

[2] *Presidential Policy Directive 21: Critical Infrastructure Security and Resilience* (PPD-21)*,* February 12, 2013, Washington, DC: The White House, http://www.whitehouse.gov/the-press-office/2013/02/12/presidential-policy-directive-critical-infrastructure-security-and-resil.

1 Resilience in the context of health is cited in *Building Community Health Resilience to Disasters*[3] and in
2 the National Health Security Strategy[4]:

3   *The ongoing and developing capacity of the community to account for its vulnerabilities and*
4   *develop capabilities that aid that community in (1) preventing, withstanding, and mitigating the*
5   *stress of a health incident; (2) recovering in a way that restores the community to a state of self-*
6   *sufficiency and at least the same level of health and social functioning after a health incident; and*
7   *(3) using knowledge from a past response to strengthen the community's ability to withstand the*
8   *next health incident (RAND).*

9   *CHR is the ability of a community to use its assets to strengthen public health and healthcare*
10   *systems and to improve the community's physical, behavioral, and social health to withstand,*
11   *adapt to, and recover from adversity (NHHS).*

12 What is clear from these descriptions is that engagement and empowerment of the *whole community*—
13 government agencies at all levels, organizations, institutions, and groups that have roles,
14 responsibilities, or vested interests in health resilience and the overall resilience of the region where
15 that community is located—are fundamental to CHR. This broad and diverse stakeholder constituency
16 includes representatives of Federal, State, and local agencies that address public health; emergency
17 management, environmental issues, and planning; mass-care and community service groups, such as
18 social service non-profits, ethnic and faith-based groups; and lifelines and other essential service
19 providers, such as hospitals and healthcare facilities, behavioral healthcare programs, services for at-risk
20 or vulnerable populations, businesses, schools, and other academic institutions.

21 Over the last several years, various public-private sector initiatives have been undertaken by national,
22 State, and local governments with stakeholders in the United States and a number of countries that
23 have validated this approach to resilience. There is a growing number of community-resilience-focused
24 public-private partnerships, and there are various models for this type of mechanism. In the
25 United States alone, there are several of these coalitions at the multi-state, state, county, and municipal
26 levels.[5]

27 ## The Community Health Resilience Toolset

28 The whole community approach requires bringing together this broad stakeholder constituency to
29 identify the community's collective health and related resilience needs to prepare for, respond to, and
30 recover from an emergency event, and further determine what capabilities are required to meet these
31 needs in the face of all-hazards threats. The *Community Health Resilience Toolset* provides the guidance,
32 tools, and resources needed to build resilience over time in a sustainable process.

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[3] *Building Community Resilience to Disasters*, 2012, Arlington, VA, RAND,
http://www.rand.org/pubs/technical_reports/TR915.html.

[4] U.S. Department of Health and Human Services, Assistant Secretary for Preparedness and Response (ASPR),
"2014 Draft: National Health Security Strategy".

[5] U.S. Department of Homeland Security Federal Emergency Management Agency (FEMA), "Public Private
Partnership Models," http://www.fema.gov/public-private-partnership-models.

Development of the Toolset

The Community Health Resilience Toolset was developed through a CHR Initiative in a year-long, rigorous, stakeholder-driven project sponsored by the U.S. Department of Homeland Security's Office of Health Affairs (DHS/OHA) in partnership with the U.S. Department of Health and Human Services (HHS) and with representatives from other Federal partners, state and local agencies, and private sector and non-profit organizations from across the Nation. The Initiative built upon a wide range of health security, emergency preparedness, and related policies and activities at the Federal, State, and local levels, including evolving climate change resiliency considerations.

The goal of the CHR Toolset is to provide practitioners and experts from all sectors, disciplines, and functional areas who have roles, responsibilities, or interests in CHR access to guidance and resources to make their community (or organization) more resilient. The CHR Toolset:

- Provides users a comprehensive overview of what CHR is—its many elements and characteristics—and what CHR requires.

- Provides guidance, information, resources, and best practices needed to enable and empower communities, organizations, and individuals to be health resilient through the Toolset's website.

- Provides a source of information on capabilities and solutions that public/private-sector and non-profit organizations have, or are developing, as well as other policy and educational resources to improve CHR under steady-state conditions and during emergencies through the Toolset's website.

- Assists the broad range of stakeholders involved in all aspects of CHR—including developing or improving continuity, response, and recovery plans.

- Provides a process for stakeholder engagement, development, and implementation of sustainable, collaborative action strategies.

- Offers a high-level checklist of needs and capabilities to evaluate organizational or community all-hazards health resilience.

Meeting User Needs

The Toolset is designed to meet the needs of the broad range of CHR stakeholders previously noted. Users can employ the Toolset in several ways:

- As a means to engage the broad stakeholder base and show a path toward CHR;

- To raise awareness and deeper insights into hazards and consequences that communities face, including non-traditional and emerging threats, such as climate change-related events;

- To learn about best practices that public/private-sector and non-profit organizations have, or are developing, to address preparedness gaps;

- To access policy and educational resources (e.g., studies, assessments, and lessons learned from disasters, events, workshops, and exercises on CHR);

- To help identify, prioritize, and undertake actions as part of an ongoing, sustainable process to improve CHR under steady-state conditions and during emergencies; and

- To train new staff and expand the skills of veteran personnel on both strategic and operational needs and actions necessary for building health-resilient communities and organizations.

Fundamental Principles and Key Terms of Community Health Resilience

In addition to the whole community approach and the resilience definitions previously noted, there are basic principles and key terms that are fundamental to understanding CHR and what it requires, and that form the basis of the Toolset. The elements include:

- Health (including mental health), safety, and well-being are necessary for overall community resilience under normal conditions and emergency situations.

- CHR is essential from individual to global levels in dealing with all-hazards disasters and incidents, natural and manmade, including terrorism, aging and deteriorating infrastructure, technological causes, climate change, and any unexpected event.

- CHR requires engagement, involvement, and collaboration of the "whole community" of stakeholders with missions, responsibilities, and vested interests in building, maintaining, and improving public health and welfare.

- Resilient individuals, families, organizations, and their communities are only as resilient as the regions in which they are located and vice versa.

- Economic and environmental resilience are required for CHR.

- CHR depends on the reliability and security of the interdependent lifelines, health and healthcare facilities, other critical infrastructures and assets, and essential service providers that support citizen daily life. Critical assets include healthcare and other essential workers and first responders.

- Better understanding of dependencies and interdependencies among these organizations is necessary to adequately and effectively prepare, mitigate, respond to, and recover from all-hazards disasters and incidents that impact CHR.

- CHR requires unprecedented information-sharing across jurisdictions and sectors, with community and social and human service organizations, and with the infrastructure that supports them all.[6]

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[6] The fundamental principles identified by the CHR stakeholders include—but are not exclusive to--themes recognized by the National Biodefense Science Board's recommendations on CHR released April 2014.

1   Key Terms

2   In addition to the fundamental principles there are key terms that are described according to how they
3   are used in the CHR Toolset. Where possible, they were drawn from recent DHS, HHS, and other Federal
4   policy documents. In other cases, they were drawn from stakeholder-validated guides or standards.

"Whole Community" Resilience	Focuses on enabling the participation in national preparedness activities of a wide range of players from the private and non-profit sectors, including nongovernmental organizations and the general public, with the participation of Federal, State, and local governmental partners in order to foster better coordination and working relationships (FEMA's *National Preparedness Goal*, first edition, Sept. 2011).
Operationalizing Community Health Resilience	Undertaking actions, such as developing and implementing plans, policies, strategies, procedures, systems, exercises, and training that improve a community's health resilience capabilities to respond to disruption, adapt to changing conditions, restore essential services, operations, and social cohesion, and assume a "new normal."
Health Security	Is achieved when the Nation and its people are prepared for, protected from, and respond effectively to, and are able to recover from incidents with potentially negative health consequences (*as described in the HHS Implementation Plan for The National Health Security Strategy of the United States of America, May 2012).*
Community	Refers to a group of stakeholders with some form of commonality, whether that be background, interest, performance of a particular function, geographical region (including and not limited to a village, municipality, state or province, or nation), or where shared institutions and culture exist. Communities may cross physical and political borders at local, state, regional, or national levels.
Key Stakeholders	Include individuals, private and public sector organizations, community groups and institutions, and other organizations that face challenges in an event or disaster; have responsibilities in emergency preparedness, operations, and management; and/or play major roles in providing the essential services and products that underpin public health and safety, the economy, environment, and individual and social well-being.

At-Risk Individuals	Individuals who may have additional needs in one or more of the following functional areas: communication, medical care, maintaining independence, supervision, and transportation. Such individuals include children, senior citizens, and pregnant women; individuals with disabilities, those who live in institutionalized settings, are from diverse cultures, have limited English proficiency or are non-English-speaking; are transportation disadvantaged, have chronic medical disorders, have pharmacological dependency, or are economically disadvantaged.
Human Services	Refers to a variety of delivery systems that provide human care, such as social welfare services, education, mental health services, and other forms of healthcare. These systems provide activities, programs, or facilities for meeting basic health, welfare, and other needs of a society or group.
All Hazards	Refers to any significant threat or event—natural or manmade. This includes natural disasters, system failures, accidents, technological disasters, infrastructure deterioration, malevolent acts, and climate change-caused events.
Critical infrastructures	Include assets, systems, and networks, both physical and virtual, that support communities and regions and which are so vital that if destroyed or incapacitated would disrupt the security, economy, health, safety, or welfare of the public. Critical infrastructure may cross political boundaries and may be manmade (e.g., structures, energy, water, transportation, and communication systems), natural (e.g., surface or groundwater resources), or virtual (e.g., cyber, electronic data, and information systems).
Infrastructure Interdependencies	Refers to the physical and virtual linkages and connectivity among critical infrastructures and other essential service providers, including supply chains. Interdependencies have the potential to cause disruptions that can affect lifelines and multiple infrastructures, disrupting health facilities and healthcare support services, essential government services, businesses, and individuals in an entire region with far-reaching health and human safety, economic, societal, environmental, and national security consequences. Interdependencies can exist at multiple levels of increasing complexity and extend beyond a community, a state, and nations.

1 Community Health Resilience Requirements

2 One of the most important prerequisites of CHR is first understanding its many elements and
3 characteristics—essentially the needs and capabilities necessary to understand, identify, and improve
4 resilience. They can be best examined by using the six "Mission Areas" employed by emergency

management and security professionals—prevention, protection, preparedness, mitigation, response, and recovery.

Mission Areas

Prevention

Capabilities necessary to stop, avoid, or prevent an imminent, threatened, or actual act of terrorism through intelligence gathering and information sharing.

Protection

Capabilities necessary to safeguard citizens, residents, visitors, critical assets, systems, and networks against serious risks.

Preparedness

Capabilities necessary to plan, organize, equip, train, and exercise to prevent, protect against, mitigate, respond to, and recover from those threats that pose the greatest risk to a community.

Mitigation

Capabilities necessary to reduce loss of life and property by lessening the impact of disasters. Measures can include making critical infrastructure more resilient and engaging in risk reduction actions for specific vulnerabilities from natural hazards or acts of terrorism.

Response

Capabilities necessary to save lives, protect property and the environment, and provide for basic human needs immediately after an incident has occurred.

Recovery

Capability of a community affected by an incident to rebuild its infrastructure systems and restore housing, health, social, economic, and community services.

Focus Areas

In developing this CHR Toolset, the Stakeholder Group identified many needs (approximately 88) and capabilities necessary for CHR within the six Mission Areas, with many of them falling under two or more Mission Areas. The Group also discovered that several others cut across all the Mission Areas. The Toolset provides an easy way to view and assess this list of Key Needs and Capabilities through a chart that cross-walks each with the six individual Mission Areas. Because of the large number of Key Needs and Capabilities, it also was necessary in the Toolset to categorize them to better be able at a glance to see what CHR requires. This also provides the user a way to readily (1) identify preparedness and broader resilience gaps; (2) determine what capabilities are needed to address these gaps; and (3) select for further investigation existing specific plans, procedures, tools, technologies, and other resources that are available for this purpose in the Toolset. The following 13 categories—the CHR Focus Areas—are used to organize CHR needs and capabilities.

1. Healthcare and Related Public Health and Emergency Preparedness Plans and Resources
2. Critical Infrastructure and Associated Interdependencies, Risk Assessment, and Mitigation
3. Coordination and Collaboration across Jurisdictions, Sectors, and Disciplines
4. Communications, Critical IT Systems, Information Sharing, and Health Data Issues
5. Continuity of Business and Operations and Supply Chain Management

1   6. Response Challenges
2   7. Recovery and Long-Term Restoration Issues
3   8. Human Factors, Including Physical and Mental Health and Related Community, Family, and
4   Individual Issues
5   9. Environmental Health and Food, Agriculture, and Veterinary Medicine
6   10. Legal, Policy, and Liability Issues
7   11. Public Engagement, Empowerment, and Information, Including Media
8   12. Education, Training, and Exercises
9   13. Financial and Broader Resourcing Challenges

10 Examples of needs and capabilities that fall under each of the respective 13 Focus Areas include:

Healthcare and Related Public Health and Emergency Preparedness Plans and Resources	Medical surge capacity, including pediatric medical surge; availability of pharmaceuticals, medical, and other materials; availability of essential services, power, and fuel, including for backup generators, ambulances, etc.; critical vendor availability; healthcare-facility-related public safety and security issues; access to personal protective equipment; alternative care facilities; effectiveness of preparedness plans; prioritized distribution of vaccinations/antivirals; availability of medical/hygiene supplies; lab analysis capabilities; disaster sheltering.
Critical Infrastructure and Associated Interdependencies, Risk Assessment, and Mitigation	All-hazards threat characterization and assessment; identification and prioritization of critical assets; interdependencies-related vulnerabilities and preparedness gaps; ensuring confidentially of proprietary and sensitive infrastructure-related data; assessment of potential and cascading impacts on infrastructures and essential services under different threat scenarios—including impediments to response and recovery; identification of potential mitigation measures.
Coordination and Collaboration across Jurisdictions, Sectors, and Disciplines	Creation or strengthening of cooperative mechanisms to foster coordination and collaboration, including "whole community" collaboration of public, private, and non-profit organizations and associations with roles and responsibilities or interests in preparedness, public health, and resilience.
Communications, Critical IT Systems, Information Sharing, and Health Data Issues	Alert and warning/notifications; public health messaging, including to schools, eldercare facilities, and other institutions with significant populations; data collection and dissemination; availability of patient health data, IT systems reliability, resilience, and security; Health Insurance Portability and Accountability Act (HIPAA) restrictions on individual health information.

Continuity of Business and Operations and Supply Chain Management	Economic consequences of different scenarios; identification of essential operations and activities, assessment of potential disruptions to services and identification of potential mitigation; workforce policy issues; involvement of broad range of businesses in preparedness activities; training of employees and exercising of continuity plans and procedures.
Response Challenges	Incident management/unified command/area command, roles and missions; security for vaccine distribution in transit and for dispensing organizations onsite, as well as for grocery stores and pharmacies; mutual aid agreements; availability of emergency managers and first responders; evacuation and mass care; temporary sheltering; volunteer training and management; resource requirements and management.
Recovery and Long-Term Restoration Issues	Recovery management structure—what organizations and how they are organized; roles and missions; restoration decision-making, including prioritization of service restoration and rebuilding resilient communities; debris and hazardous waste removal; siting and land use issues; resource requirements and management.
Human Factors, Including Physical and Mental Health and Related Community, Family, and Individual Issues	Understanding and dealing with the psychological impacts of affected individuals; including those at-risk (elderly, disabled, economically disadvantaged, children, pregnant women) and ethnic and cultural groups; identifying and addressing family assistance needs; education and academic institutions; eldercare facilities; community centers; daycare centers.
Environmental Health and Food, Agriculture, and Veterinary Medicine	Impacts to animal health and agriculture, including the food supply ; Impacts to the environment, including health threats associated with hazardous materials.
Legal, Policy, and Liability Issues	Contractual issues; human resource and personnel issues; information from/coordination with regulators; privacy issues; ethical issues; environmental issues; waivers; liability associated with vaccine distribution and administering and volunteerism.
Public Engagement, Empowerment, and Information, Including Media	Procedures and systems for coordinating cross-jurisdiction public health and other emergency information; identification of information to convey; regional coordination process and mechanisms; plans for maintaining public confidence and outreach to groups servicing at-risk individuals; information for cultural and faith-based groups through social and conventional media and personal contact.

Education, Training, and Exercises	Educational tools for the general population on threats, risks, and preparedness actions; training on plans and procedures; targeted workshops and exercises to test plans and equipment; regional interdependencies and other multi-stakeholder exercises to raise awareness of vulnerabilities, consequences, and gaps; inclusion of health clinics, human care, eldercare facilities in workshops and exercises.
Financial and Broader Resourcing Challenges	Procedures for, and constraints on financial and technical resources from Federal, State, and local agencies; private-sector disaster recovery financial issues; other potential sources of funding for CHR, including foundations; model mechanisms for financing pre-event mitigation activities and meeting post-event recovery resource needs.

Practices That Enable Community Health Resilience

After gaining an understanding of CHR fundamental principles, key terms, and requirements, the next step to building CHR is to look at the characteristics of the community itself—its population and its composition, economic base, geography and environment, culture and governance structure, and the high and low probability threats and unexpected natural and manmade hazards the community faces. It is also necessary to identify and examine the authorities and interests of the key organizations and associations that may have roles, missions, or be actively involved in resilience-related activities for that community. A primary objective is to either leverage an existing public-private partnership or other multi-stakeholder group (e.g., a healthcare consortium or Chamber of Commerce), or convene for the first time the diverse group of practitioners and experts with roles and responsibilities or interests in CHR. It is this coalition of stakeholders that will determine the community's collective resilience gaps and recommended actions to improve CHR. The stakeholders will do this through a multi-step process that creates and enhances professional relationships and raises awareness of resilience challenges and the need for collaboration to improve CHR. This process, which has been undertaken with different variations by communities and regions across the Nation and in other countries, has been well documented and can be accessed through the resources of the Toolset. The process entails:

1. **Identification, outreach, and convening of the broad stakeholder community** of representatives from public health and other government agencies, and public, private, and non-profit stakeholders to share interests and concerns related to CHR resilience issues and challenges. This Stakeholder Group should represent the range of key stakeholders involved in public health and emergency management government, the private sector, community institutions, and other key organizations with vested interests in resilience.

2. **Raising awareness through educational seminars and workshops to explore significant CHR issues and provide guidance and insights for incorporation into a prioritized Action Plan.** The seminars or workshops can also serve to identify goals and concerns among government, private sector, and healthcare partners on response and recovery; and examine current plans, roles, responsibilities, expectations, interests, and constraints. Lessons learned from the workshops are compiled in summary reports that are coordinated with stakeholders and incorporated into the initial draft Action Plan framework.

3. **Examining needs and capabilities and identifying gaps** through findings from previous exercises or lessons learned from incidents or other events that affected the community; also through a stakeholder survey, focus groups, and interviews, and by examining existing preparedness plans and websites of local and State agencies to gauge capabilities.

4. **Developing an initial draft Action Plan** from the information gleaned from the preceding three activities.

5. **Planning and conducting one or more multi-stakeholder interdependencies tabletop exercises** with a scenario designed and optimally facilitated by the Stakeholder Group members themselves. This exercise does not test existing plans but rather is an intensive discussion-focused workshop that utilizes a realistic and accurate scenario with a storyline format that includes events and "issues questions" to raise awareness and identify CHR shortfalls and needs. (Note: These exercises are particularly valuable in uncovering infrastructure interdependencies-related weaknesses and consequences that can undermine CHR. Scenarios can focus on loss of essential services [e.g., a prolonged power outage, communications disruptions], mass evacuations or the need to move patients from impacted hospitals, challenges to the elderly or disabled, ethnic-group-related language problems, scarcity of key medical equipment, and other medical surge and broader supply chain issues.)

6. **Holding a post-exercise Action Planning Workshop** to examine and prioritize findings and recommendations in the exercise report and information from other relevant activities.

7. **Producing the Stakeholder-Validated Action Plan** of prioritized short-, medium- and long-term activities coordinated initially with the stakeholder work group and then with the broader stakeholder constituency.

8. **Developing an Action Plan Implementation Strategy** with milestones and a schedule that specify lead and participating organizations for collaborative activities and sets up work groups of interested agencies and organizations to define requirements, determine milestones, and identify sources of funding and technical and other assistance.

Enhancing Community Health Resilience through the Action Plan

The Action Plan is designed to be a dynamic roadmap to improve CHR and is an integral element in a continuous improvement process in which lessons learned from events and disasters, as well as results from additional tabletops and functional exercises, workshops, and other events, are incorporated as new needs are identified with activities and projects to make further improvements.

Importance of an Ongoing Collaborative Mechanism. At this point in the CHR process, there should be a public-private-non-profit stakeholder coalition of agencies and organizations willing to move forward to undertake projects in the Action Plan that fall within their mission or meet their interests. This coalition may be a formal partnership or informal collaboration, with membership open to interested key stakeholder organizations and no defined organizational structure. In large metropolitan areas, such a coalition may be a broad "network of networks" of numerous multi-stakeholder associations and groups representing many sectors, jurisdictions, disciplines, and functions.

Need for a Facilitating Organization. Essential to sustaining CHR is a facilitating organization or mechanism to continue to hold stakeholder events and exercises to explore significant issues, develop requirements for projects, and provide administrative and logistics support for CHR activities. The facilitating entity also can help in identifying potential sources of funding and expertise. Community stakeholders may elect to set up this mechanism; or a local or state agency, business, community, regional group or association, or academic institution may take on this role. This mechanism ideally should be an established non-profit organization able to secure funds and technical resources from different sources, public and private, for cooperative activities, and help support the lead agencies and organizations for the respective activities in the Action Plan. There is a growing number of community resilience-focused public-private partnerships, and there are models for this type of collaborative mechanism across the United States and in other nations. In the United States alone, there are several partnerships and models at the multi-state, State, county, and municipal levels. Examples can be accessed through the CHR Toolset.

Challenges To Improving Community Health Resilience

The greatest challenge to CHR will be maintaining stakeholder enthusiasm and momentum generated by the Action Plan development process, particularly the interest of those individuals and organizations that "self-select" themselves for leadership roles to move forward on the Action Plan activities. One of the biggest force-multipliers for CHR is volunteer assistance from interested and engaged stakeholders, and keeping their interest will be crucial to sustaining forward progress. The key to keeping their interest will be the ability to find the necessary funding and technical expertise to undertake implementation of initial Action Plan activities. Support from government agencies, businesses, and foundations will be essential. The Toolset can point to resources that can help along these lines.

In anticipation of these challenges, the Toolset can be of significant assistance to users whose goal is to bring together whole community stakeholders to develop or enhance collaborative action for building health resilience. The Toolset has tools and resources that provide information on different approaches to building regional, sector, or discipline-specific public-private partnerships that focus on preparedness and resilience. These tools and resources include guidance for how to convene stakeholders, how to undertake a process to collectively raise awareness of CHR issues and challenges, and how to develop and implement a stakeholder-validated CHR path forward to address these needs. The Toolset also provides links to presentations, exercises after action reports, examples of scenarios, workshop agendas, and action plans that can be used to build CHR. In addition, the Toolset provides methods that regions and communities are using to maintain and sustain progress toward greater resilience.

Using the Toolset To Enable Community Health Resilience

The CHR Guidance Document and resource website are closely integrated to provide a system that can be used to help understand and gain information on needs, options for actions, and capabilities to meet those needs, that is, "operationalize" resilience. Through the Toolset's website, users can access a wide range of information. Some usages of the Toolset website include gaining information on:

- All-hazards threats, including climate-change-related events that can potentially impact CHR;

- Specific CHR needs or capabilities;

- Mission area to determine capabilities needed to meet a particular resilience challenge;

- CHR requirements in a specific focus area;

- Accessing a range of best practices in building community resilience that are being used in states, localities, organizations, and associations;

- Learning about Federal and other policies and regulatory issues that affect CHR; and

- Gauging the extent of resilience of an organization or community by using the Toolset capabilities as a checklist.

The Toolset accomplishes this by providing the following functions and features:

- Quick access to needs and capabilities in each of the mission areas under the respective focus areas.

- Access to stakeholder-submitted CHR resources and references:
  - Each resource has a basic description of the resource as related to CHR
  - Each resource has a clickable link to access the resource.
  - Each resource is matched to at least one key capability, focus area, and mission.
  - Each resource is searchable by any word found in the submitted description, key capability, focus area, and mission area assigned to the resource.

- Ability to quickly fill out the Submission Template to suggest a CHR-related resource for review to add to the Toolkit.

- Ability to reach the CHRI support team to:
  - Become a part of the CHRI stakeholder group (and receive periodic updates),
  - Ask questions, and
  - Provide feedback and ideas for further development of the Toolset.

- Additional features and functions include:
  - Key Capabilities List,
  - Open-ended Search,
  - User Evaluation to solicit comments and recommendations for Toolset improvement,
  - Stakeholder Group list, and
  - Useful Terms.

Questions To Navigate through the Community Health Resilience Focus Areas

The Toolset is designed to accommodate users with different needs and from various disciplines to retrieve information through the Focus Areas and find examples of specific tools, best practices, and other CHR-related resources. Users can also "walk through" the range of CHR capabilities using the Focus Areas to gain a basic understanding of the operational components of CHR. In addition, users can access the Toolset for available plans, policies, studies, software, and other tools and technologies that could be used to build on existing capabilities and improve CHR. Users also can employ the Toolset to research or find answers to CHR-related questions or to research where improvements to community (or organizational and individual) health resilience may be needed.

Sample questions for each Focus Area are provided below to give users questions they may ask themselves to help determine if they need to explore various Focus Area resources to address their own needs or identify capabilities they could enhance in their community.

1. *Healthcare Preparedness and Related Public Health and Emergency Preparedness Plans and Resources*

   - Does your community or organization have an effective plan for adequate medical care surge capacity to respond to different types of large-scale disasters or significant incidents? Does this plan also cover pediatric medical surge? Does it also take into account security needs to deal with the influx of patients and the "worried well?"

   - Have emergency management and public health services in your community identified and engaged the broad range of healthcare facilities and suppliers, and health and human service groups, including other non-governmental organizations, which are or would be involved in all aspects of disaster preparedness, response, and recovery activities?

   - Do your local hospitals and healthcare providers understand infrastructure interdependencies (on power, water, communications, and information technology systems) that could disrupt operations or force patient evacuations in an emergency?

   - Do your community's healthcare organizations collaborate to deal with significant emergencies, have mutual assistance agreements, and adequate and resilient communications to meet response needs?

2. *Infrastructure and Associated Interdependencies; Risk Assessment, and Mitigation*

   - Do the key stakeholders in your community have a good understanding of the range of threats and events that require improved resilience, including emerging threats such as cyber-attacks and disruptions, and climate change-related events?

   - Has your community conducted workshops or tabletop exercises to illuminate regional infrastructure interdependencies under different scenarios that could affect public health and welfare and overall health resilience?

   - Have local hospitals, healthcare centers, human service and other organizations with roles and responsibilities in community health resilience
     - Examined potential vulnerabilities to physical and cyber disruption of operations?
     - Assessed and taken steps to address continuity of their crucial suppliers, including fuel for emergency generators, essential medical equipment, and IT support services?

   - Has local government or the major service providers (power, communications, water systems) taken a risk-based approach to prioritizing the necessary areas of improvement to enhance health resilience?

3. *Coordination and Collaboration across Jurisdictions, Sectors, and Disciplines*

   - Do jurisdictions in your community share and coordinate their plans?

   - Is there collaboration across disciplines, functions, and infrastructure sectors on disaster-resilience-related needs and improvement actions?

- Do local government agencies reach out and include businesses and other private sector enterprises, including health and human service and non-profit organizations, in preparedness activities and exercises?

- Is there any type of multi-stakeholder partnership or coalition in your community that is focusing on health resilience issues? If not, is there a group or other type of mechanism that could be encouraged to focus on CHR?

4. *Continuity of Business and Operations and Supply Chain Management*

- Are local government agencies and health and human service organizations prepared for threats and events that might disrupt public services for prolonged periods?

- Are medium and small businesses in your community generally knowledgeable about the need for continuity planning? Do they have access to information and guidance on how to develop continuity plans? Are there continuity planning associations in your community or other business associations that meet regularly to discuss continuity and resilience issues?

- Does your organization have human resource plans to assist employees post-disaster (e.g., extended leave policies, tested telecommuting procedures, onsite childcare?)

- Does your organization have a general understanding of its dependencies on lifelines and other essential services and how regional infrastructure interdependencies could affect operations and customers?

5. *Human Factors, Including Physical and Mental Health, At-Risk and Vulnerable Populations, Family (including women and children's needs), and Individuals*

- Does your community include social services, such as mental health, sheltering, and case management to support the needs of families who are attending to patients involved in a surge, or to transition surge patients back to the community with support?

- Are the needs of elderly residents with medical needs living at home taken into account in public health and emergency planning? If so, in what way?

- Are there provisions and tracking mechanisms for the movement of patients from hospitals across jurisdictions in a medical surge event? What about the movement of children or infants who require special considerations?

- Does your community provide translated preparedness materials or have interpreters available to address the needs of ethnic populations in an emergency situation?

6. *Environmental Health and Food, Agriculture, and Veterinary Medicine*

- Does your community or organization have plans and necessary detection and decontamination equipment and countermeasures to deal with threats and emergencies that involve hazardous materials or other threats to the environment? Are there shelter-in place procedures developed for the release of toxic air emissions by healthcare facilities and for the general public? How would these procedures be communicated to the public?

- Does your community or organization have procedures in place to address health threats or incidents involving agriculture or livestock?

- Are there arrangements for addressing issues related to pets, livestock (living and dead), and service animals during and after major disasters?

7. *Response Challenges*

- Have roles, authorities, and responsibilities been evaluated among government, health and human service organizations, and the broader stakeholder constituency in your community?

- Does your community have an incident command structure for emergencies and/or participate in drills and exercises utilizing the incident command structure?

- Does your community have a mass evacuation plan? If so, is it realistic? Does this plan take regional infrastructure interdependencies into account? Has it been tested?

8. *Recovery and Long-Term Restoration Issues*

- Has your community or organization developed processes and plans to assure:
  - The continuity of regional supply chains that could affect hospitals and other critical service provider organizations, including health and human service organizations;
  - The distribution of fuel, water, foods, pharmaceuticals, and other essential commodities post-disaster for more than 72 hours;
  - Debris removal and disposal, including hazardous materials;
  - Plans for long-term housing that includes essential community services and enables people to return to jobs after major regional disasters that destroy residential areas; and
  - A decision-making process and/or structure to:
    - Determine restoration priorities of interdependent lifelines and other infrastructures,
    - Make restoration siting and land use decisions, and
    - Determine how to rebuild for resiliency.

9. *Communications, Critical IT Systems, Information Sharing, and Health Data*

- Does your community have a system established to share information among government, private sector, and non-profits working on community health or broader resilience issues?

- Is communications interoperability an issue for your community or organization that could affect the ability to perform the job or mission?

- Has your community or organization developed a situational awareness capability or system to address disasters and incidents? If so, does this system take infrastructure interdependencies into account? Does it address cyber threats and disruptions?

10. *Legal, Policy, and Liability Issues*

- What Federal, State, or local regulations (e.g., transportation, energy, environmental, safety, health-related) could affect the ability of your organization or community to readily recover post-disaster?

- Does your organization know how to obtain waivers quickly in an emergency situation to undertake essential response or recovery actions? Who would be contacted and how?

- How would HIPAA requirements affect the ability of medical staff to acquire, share, or disseminate health information during response and initial recovery after an emergency event?

11. *Public Engagement and Empowerment*

- Is there a public-private-non-profit partnership or other types of collaborative groups that focus on CHR, disaster preparedness, or related issues in your community? If not, how would you go about creating this?

- Do local emergency management, public health, and other local agencies support whole community involvement in disaster preparedness activities?

- Has your agency or organization identified the range of whole community stakeholders that should be involved in a collaborative initiative to improve CHR?

12. *Education, Training, and Exercises*

- Are there local government outreach and education programs in your community to educate the general public on threats and potential emergencies and what to do for preparedness and resilience?

- Do hospitals and healthcare providers hold exercises with public health agencies, human services, and other stakeholder organizations to assess disaster response and recovery plans?

- Are workshops and exercises conducted in your communities that involve the broad range of stakeholders who would be involved in a major emergency that affected public health and safety?

13. *Financial and Broader Resourcing Challenges*

- Does your agency or organization understand requirements and procedures for requesting/accessing post-disaster recovery assistance or loans?

- Does your community have, or have plans for creating an organizational structure that can finance pre-event mitigation, post-disaster restoration activities, or other community health resilience improvement activities?

Contributing to the Toolset

An important way to ensure the Toolset has optimal utility for users is to incorporate tools and resources from the broad stakeholder constituency. Tools and resources can be submitted electronically through the Online Toolset (http://communityhealthresilience.anl.gov) and made available for users to build CHR. Submissions to the CHR Toolset should meet the following criteria:

- Fit within at least one of the 13 CHR Focus Areas as described in the Key Needs/Capabilities examples descriptions.

- Be publically available or accessible upon request to the broad range of users.

- Be government-owned or sponsored, or if private sector or non-profit-developed, recommended by one or more documented users who have no commercial interest in the tool or resource.

1 Submissions are vetted to ensure applicability and that appropriate content is submitted. This screening
2 process will ascertain if the tools and resources meet the above criteria and provide a contribution to
3 CHR.

4 Community Health Resilience Guidance Resources

5 Several resources were developed to facilitate use of the Toolset and which were incorporated into the
6 Toolset website. These development resources include:

7 • Stakeholder-identified CHR Mission Areas and Key Capabilities,
8 • A Mission Areas and Key Capabilities "Cross-walk" Matrix,
9 • Community Health Resilience at a Glance,
10 • A List of the Organizations Engaged in the Development of the CHRI,
11 • Common Abbreviations, and
12 • Useful Terms.

13 Mission Areas and Key Capabilities

14 The following are Key Capabilities grouped in the Mission Areas of prevention, protection, preparedness,
15 mitigation, response, and recovery.

Prevention	*Capabilities necessary to stop, avoid, or prevent an imminent, threatened, or actual act of terrorism through intelligence gathering and information sharing.[7]*

16 Prevention Key Capabilities

17 • Improved awareness of all-hazards threats and events that affect CHR;
18 • Screening, search, and detection for all-hazards health threats, including chemical, biological,
19   radiological, nuclear, and explosives;
20 • Interdiction and disruption (delaying, stopping, or securing threats and hazards);
21 • Public health surveillance and epidemiological investigation;
22 • Animal disease surveillance and investigation;
23 • Agriculture surveillance and food safety;
24 • Intelligence collection, analysis, and dissemination;
25 • Forensics and attribution;
26 • Laboratory testing capacity and timeliness;
27 • Medical countermeasures planning and dispensing;
28 • Community disease control measures;
29 • Health information exchange;
30 • Cross-sector and discipline information sharing;
31 • Near real-time systems for health-security data;
32 • Integrated, scalable healthcare delivery systems; and
33 • Education and assistance to individuals, families, and communities.
34

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[7]FEMA, 2012, *National Preparedness Goal,* http://www.fema.gov/preparedness-1/national-preparedness-goal.

<table>
<tr><td>*Protection*</td><td>*Capabilities necessary to safeguard citizens, residents, visitors, critical assets, systems, and networks against serious risks.*[8]</td></tr>
</table>

1   Protection Key Capabilities

2   • Protection/security for health delivery facilities, systems, supply chains, and infrastructure;

3   • Identification of critical assets and dependencies and interdependencies;

4   • Threat and vulnerability assessments;

5   • Cyber security for health information and healthcare systems;

6   • Hardening, retrofitting, and remote or redundant siting of health delivery facilities and assets;

7   • Access control and protective measures; and

8   • Promoting and fostering individual and community health and safety awareness.

<table>
<tr><td>*Preparedness*</td><td>*Capabilities necessary to plan, organize, equip, train, and exercise to prevent, protect against, mitigate, respond to, and recover from those threats that pose the greatest risk to a community*[9]</td></tr>
</table>

9   Preparedness Key Capabilities

10   • Identification of key stakeholder groups and constituencies necessary for CHR (public health,
11   healthcare services, social service and community groups and the communities they serve, at-
12   risk and ethnic groups)

13   • Assessment of CHR demographics;

14   • Geography and climate, and potential climate change;

15   • Population factors;

16   • Housing characteristics;

17   • Economic and environmental factors;

18   • Jurisdictions within the community;

19   • Cultural issues of relevance to community health;

20   • All-hazards threat identification and characterization—natural and manmade, including aging
21   and deteriorating infrastructure, technological threats, and climate change;

22   • Fostering whole community collaboration (regional, local, and neighborhood, and within and
23   across disciplines and sectors);

24   • Effective plans and policies for health resilience response, mitigation, and recovery;

25   • Alert and warning and timely communication;

26   • Interoperable and resilient communications systems;

27   • Indicators for warning;

28   • Identification of users and preferred communications methods;

29   • Use of traditional media and creation of social networks and communications procedures;

30   • Health workforce recruitment, availability, maintenance, and certification;

31   • Volunteer recruitment, training, and certification;

32   • Community health and healthcare resources, including mental health;

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[8] Ibid.

[9] Ibid.

1 • Medical surge capacity for emergencies;
2 • Emergency mutual assistance agreements;
3 • Training and regional and targeted exercises and drills (for range of stakeholder groups—
4   including social service organizations and media);
5 • Community and individual outreach, education, and empowerment;
6 • Integration of military support to State and local authorities into planning;
7 • Cooperation and coordination across State and national borders and with international health
8   and other relevant global organizations;
9 • Health resilience assessment and measurement approaches for facilities, assets, and
10   communities; and
11 • Continuous and sustainable process and strategy for community, organizational, and individual
12   health resilience improvement.
13

Mitigation	*Capabilities necessary to reduce loss of life and property by lessening the impact of disasters. Measures can include making critical infrastructure more resilient and engaging in risk reduction actions for specific vulnerabilities from natural hazards or acts of terrorism.[10]*

14 ## Mitigation Key Capabilities

15 • All-hazards threat assessment capabilities,
16 • Integrated physical and cyber risk assessment (for organizations and communities) and risk
17   management,
18 • Vulnerability reduction measures,
19 • Mitigation of hazards to health and healthcare facilities and systems,
20 • Non-pharmaceutical interventions (for communities and individuals), and
21 • Creating public support and securing financial resources for mitigation.
22

Response	*Capabilities necessary to save lives, protect property and the environment, and provide for basic human needs immediately after an incident has occurred.[11]*

23 ## Response Key Capabilities

24 • Understanding of roles, responsibilities, and authorities;
25 • Effective multi-jurisdiction/cross-sector coordination and integrated command structure;
26 • Operational communications and situational awareness;
27 • Emergency public health and medical services (availability, certification, mobile assets, emergency
28   triage and pre-hospital treatment, use of remote care technologies, etc.);
29 • Evacuation and shelter-in-place;
30 • Critical transportation for patients, staff, and certified volunteers;
31 • Mass care;
32 • Search and rescue;
33 • Welfare of at-risk individuals;

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[10] FEMA, 2012, *National Disaster Recovery Framework,* http://www.fema.gov/resources-1.
[11] Ibid.

1 • Decontamination;

2 • Debris removal;

3 • Hazmat management (response, removal);

4 • Assurance of essential disaster supply chains (e.g., food, water, fuel) and services (wastewater and
5   solid waste disposal, power generators, etc.);

6 • Medical materiel management and distribution;

7 • Responder safety and health;

8 • Volunteer management;

9 • Fatality management;

10 • Pet and animal management;

11 • On-scene security and protection;

12 • Resource (government and private sector) management (identification, access, distribution, and
13   monitoring);

14 • Legal, liability, and regulatory protections, constraints, and waivers; and

15 • Federal civilian and military support to State and local authorities.

16

Recovery	*Capability of a community affected by an incident to rebuild its infrastructure systems and restore housing, health, social, economic, and community services.*[12]

17 ## Recovery Key Capabilities

18 • Organizational structure for coordinated decision-making on restoration priorities for
19   infrastructures, housing, etc.;

20 • Long-term temporary housing and supporting healthcare, community, and social services;

21 • Resumption of government, businesses, medical, community, and social services;

22 • Post-event physical and behavioral health management and monitoring;

23 • Environmental health management;

24 • Decontamination of structures, assets, soil, and water;

25 • Rebuilding for resilience;

26 • Coordinated support from nongovernment organizations;

27 • Public outreach and information;

28 • Engagement of public in community health and safety-related decision-making; and

29 • Financial resources for public and private sector restoration.

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[12] Ibid.

1 Mission Areas, Key Capabilities, and Focus Areas "Cross-Walk"

MISSION AREA						KEY NEEDS and CAPABILITIES	FOCUS AREAS												
Prevention	Preparedness	Protection	Mitigation	Response	Recovery		Healthcare, Public Health, and Emergency Preparedness Plans and Resources for CHR	Critical Infrastructure and Associated Interdependencies; Risk Assessment, and Mitigation	Coordination and Collaboration across Jurisdictions, Sectors, and Disciplines	Continuity of Operations and Business Continuity	Human Factors, including Physical and Mental Health and related Community, Family, and Individual Issues	Education, Training, and Exercises	Community Engagement and Empowerment	Environmental Health and Food, Agriculture, and Veterinary Medicine	Response-Related Challenges	Financial and Broader Resourcing Challenges	Communications, Critical IT Systems, Information Sharing, & Health Data	Recovery and Restoration Issues	Legal, Policy, and Liability Issues
X	X	X	X	X	X	Broad stakeholder involvement in planning and implementation, includes identification of key stakeholder groups and constituencies (includes public health, healthcare services, at-risk, ethnic, and faith-based groups)	X	X	X	X	X	X	X	X	X	X	X	X	X
X	X	X	X	X	X	Identification and understanding of critical assets and dependencies/interdependencies	X	X	X	X	X	X	X	X	X	X	X		
X	X	X	X	X	X	All-hazards threat identification and characterization—natural and manmade, including aging and deteriorating infrastructure, technological threats, and climate change	X	X	X	X	X	X	X	X				X	X
X	X	X	X	X	X	Cross-sector/multi-jurisdiction (regional) and cross-national border coordination and understanding of roles and responsibilities	X		X	X	X	X	X	X	X	X	X	X	X
X	X	X	X	X	X	Assessment of community health resilience demographics, including geography and climate and potential climate changes, population factors, housing characteristics, economic and environmental factors, jurisdictions within the community, cultural/political issues (e.g., home rule), and human factors of relevance to community health	X	X	X	X	X		X	X			X	X	X
X	X	X				Screening, search, and detection for all-hazards health threats, including chemical, biological, radiological, nuclear, and explosives	X		X			X	X	X			X		X

MISSION AREA						KEY NEEDS and CAPABILITIES	FOCUS AREAS												
Prevention	Preparedness	Protection	Mitigation	Response	Recovery		Healthcare, Public Health, and Emergency Preparedness Plans and Resources for CHR	Critical Infrastructure and Associated Interdependencies; Risk Assessment, and Mitigation	Coordination and Collaboration across Jurisdictions, Sectors, and Disciplines	Continuity of Operations and Business Continuity	Human Factors, including Physical and Mental Health and related Community, Family, and Individual Issues	Education, Training, and Exercises	Community Engagement and Empowerment	Environmental Health and Food, Agriculture, and Veterinary Medicine	Response-Related Challenges	Financial and Broader Resourcing Challenges	Communications, Critical IT Systems, Information Sharing, & Health Data	Recovery and Restoration Issues	Legal, Policy, and Liability Issues
X		X				Interdiction and disruption (delaying, stopping, or securing threats and hazards)			X	X	X	X	X	X			X		X
X	X	X		X	X	Public health surveillance and epidemiological investigation	X				X	X							X
X	X	X		X	X	Animal disease surveillance, investigation, and response	X		X			X		X			X	X	X
X	X	X	X	X	X	Agriculture surveillance and food safety/security (from source to consumer)	X	X	X			X		X			X	X	X
X	X	X		X	X	Intelligence collection, analysis, and dissemination	X	X				X		X	X		X		X
X		X				Forensics and attribution	X		X					X					X
X		X		X	X	Laboratory testing capacity (public health clinical, environmental)			X		X		X	X	X		X	X	X
X	X	X		X	X	Effective prophylaxis and non-pharmaceutical interventions to control disease, including countermeasures planning and dispensing	X		X	X	X	X	X	X	X	X	X		X
X	X	X		X	X	Protection/security for health delivery facilities, systems, supply chains, and infrastructure (includes hardening, retrofitting, remote or redundant siting; and facility access control measures)	X	X	X	X		X	X				X	X	X
			X	X	X	Effective plans and policies for health resilience response, mitigation, and recovery	X	X	X		X	X		X				X	X
X	X	X	X	X	X	Cross-sector, jurisdiction/national border, and discipline information sharing	X	X	X	X	X	X	X	X	X	X	X	X	X

MISSION AREA						KEY NEEDS and CAPABILITIES	FOCUS AREAS												
Prevention	Preparedness	Protection	Mitigation	Response	Recovery		Healthcare, Public Health, and Emergency Preparedness Plans and Resources for CHR	Critical Infrastructure and Associated Interdependencies; Risk Assessment, and Mitigation	Coordination and Collaboration across Jurisdictions, Sectors, and Disciplines	Continuity of Operations and Business Continuity	Human Factors, including Physical and Mental Health and related Community, Family, and Individual Issues	Education, Training, and Exercises	Community Engagement and Empowerment	Environmental Health and Food, Agriculture, and Veterinary Medicine	Response-Related Challenges	Financial and Broader Resourcing Challenges	Communications, Critical IT Systems, Information Sharing, & Health Data	Recovery and Restoration Issues	Legal, Policy, and Liability Issues
X	X	X		X	X	Use of traditional media and social networks for communications, including identification of users and their preferred communications methods	X		X	X	X	X	X	X	X		X	X	
X	X	X	X	X	X	Identification of needs and assistance for at-risk populations and ethnic groups (economically stressed, homeless, elderly, disabled, pregnant women, and children)	X	X	X		X	X	X		X		X	X	X
X	X	X	X	X	X	Ongoing medical care, such as dialysis, medical resource availability, palliative health, and access to routine care, especially for children and pregnant women.	X		X	X	X	X	X				X	X	X
	X		X			Identification of and work-arounds for barriers to care	X		X						X			X	X
X	X	X		X		Indicators for proactive alerts and warning; triggers for response and ongoing monitoring	X		X	X		X	X	X	X		X		X
	X	X		X	X	Interoperable and resilient communications systems	X	X	X	X	X	X	X	X	X	X	X	X	X
X	X	X		X	X	Risk communication (includes managing public expectations and de-escalation)	X		X	X	X	X	X	X	X	X	X	X	X
X	X	X				Security training of healthcare facility personnel.			X				X						X
X	X			X	X	Health, Emergency Services workforce recruitment, availability, maintenance, occupational health and safety, and certification	X		X	X	X	X							X
	X			X	X	Volunteer recruitment, training, and certification	X		X		X	X		X					X

MISSION AREA						KEY NEEDS and CAPABILITIES	FOCUS AREAS												
Prevention	Preparedness	Protection	Mitigation	Response	Recovery		Healthcare, Public Health, and Emergency Preparedness Plans and Resources for CHR	Critical Infrastructure and Associated Interdependencies; Risk Assessment, and Mitigation	Coordination and Collaboration across Jurisdictions, Sectors, and Disciplines	Continuity of Operations and Business Continuity	Human Factors, including Physical and Mental Health and related Community, Family, and Individual Issues	Education, Training, and Exercises	Community Engagement and Empowerment	Environmental Health and Food, Agriculture, and Veterinary Medicine	Response-Related Challenges	Financial and Broader Resourcing Challenges	Communications, Critical IT Systems, Information Sharing, & Health Data	Recovery and Restoration Issues	Legal, Policy, and Liability Issues
				X	X	Medical surge capacity for emergencies, including availability of medical and mental health resources	X	X	X	X	X	X	X	X	X	X	X		X
	X		X	X	X	Emergency mutual assistance agreements	X	X	X	X		X		X	X				X
X	X	X	X	X	X	Assurance of lifelines and essential disaster supply chains (e.g., food, water, fuel) and services (e.g., wastewater and solid waste disposal, power generators, transportation)	X	X	X	X	X	X	X	X	X	X	X	X	X
X	X	X		X	X	Population-based preparedness and resilience, particularly for at-risk populations and for women and infants	X		X	X	X	X	X				X	X	X
						Public outreach, information, and education	X	X	X	X	X	X	X	X			X	X	X
X	X	X		X	X	Regional training including targeted exercises and drills (for range of stakeholder groups—including health and human service organizations and media)	X	X	X	X	X	X	X	X	X	X	X	X	X
X	X	X	X			Mitigation of hazards to health and healthcare facilities and to systems that focus on identifying effective no- or low-cost options		X	X	X	X	X	X				X	X	X
X	X	X	X		X	Creating public support and securing financial resources for mitigation	X			X		X	X	X			X		
	X			X	X	Effective multi-jurisdiction/cross-sector integrated command structure for response and initial recovery	X	X	X	X		X	X	X	X		X	X	X
X	X	X		X	X	Situational awareness for organizations, jurisdictions, regions	X	X	X	X	X	X	X	X	X	X	X	X	X

Prevention	Preparedness	Protection	Mitigation	Response	Recovery	KEY NEEDS and CAPABILITIES	Healthcare, Public Health, and Emergency Preparedness Plans and Resources for CHR	Critical Infrastructure and Associated Interdependencies; Risk Assessment, and Mitigation	Coordination and Collaboration across Jurisdictions, Sectors, and Disciplines	Continuity of Operations and Business Continuity	Human Factors, including Physical and Mental Health and related Community, Family, and Individual Issues	Education, Training, and Exercises	Community Engagement and Empowerment	Environmental Health and Food, Agriculture, and Veterinary Medicine	Response-Related Challenges	Financial and Broader Resourcing Challenges	Communications, Critical IT Systems, Information Sharing, & Health Data	Recovery and Restoration Issues	Legal, Policy, and Liability Issues
	X			X	X	Emergency public health and medical response, including mental health services (e.g., availability, certification, mobile assets, emergency triage and pre-hospital treatment, use of remote care technologies)	X	X	X	X	X	X	X	X	X	X	X		X
	X			X	X	Evacuation and shelter-in-place	X	X	X	X	X	X							X
	X			X	X	Critical transportation for patients, staff, and certified volunteers		X	X	X	X	X			X	X	X		X
	X			X	X	Mass care and sheltering	X	X	X		X	X	X		X	X	X		X
	X			X	X	Search and rescue			X		X	X	X		X		X		X
X	X	X	X	X	X	HAZMAT management (response, removal)	X	X	X		X	X	X	X	X	X	X	X	X
	X			X	X	Medical materiel management and distribution	X	X	X	X	X	X	X	X	X	X	X	X	X
	X			X	X	Fatality management	X		X	X	X	X	X		X				X
	X			X	X	Pet and animal management, veterinary stockpiles, and dead animal disposal	X		X		X	X	X	X	X	X	X	X	X
	X			X	X	Resource (government and private sector) management (identification, access, distribution, and monitoring)	X	X	X	X	X	X		X	X	X	X	X	X
X	X	X	X	X	X	Legal, liability, and regulatory issues, constraints/waivers	X		X	X	X	X	X	X	X	X		X	X
X	X	X		X	X	Integration of Federal civilian and military support with State and local authorities for planning, response, and recovery	X	X	X	X	X	X	X	X	X	X	X	X	X
	X			X	X	Crisis standards of care	X		X		X	X			X				X
	X			X		Pharmaceutical caches	X		X	X	X		X		X	X		X	X

MISSION AREA						KEY NEEDS and CAPABILITIES	FOCUS AREAS												
Prevention	Preparedness	Protection	Mitigation	Response	Recovery		Healthcare, Public Health, and Emergency Preparedness Plans and Resources for CHR	Critical Infrastructure and Associated Interdependencies; Risk Assessment, and Mitigation	Coordination and Collaboration across Jurisdictions, Sectors, and Disciplines	Continuity of Operations and Business Continuity	Human Factors, including Physical and Mental Health and related Community, Family, and Individual Issues	Education, Training, and Exercises	Community Engagement and Empowerment	Environmental Health and Food, Agriculture, and Veterinary Medicine	Response-Related Challenges	Financial and Broader Resourcing Challenges	Communications, Critical IT Systems, Information Sharing, & Health Data	Recovery and Restoration Issues	Legal, Policy, and Liability Issues
	X				X	Organizational structure for coordinated decision-making on restoration priorities for infrastructures, housing, re-building resilient	X	X	X	X	X						X	X	X
	X				X	Long-term temporary housing and supporting healthcare, community, and social services	X	X	X	X	X		X		X	X	X	X	X
	X		X	X	X	Resumption of government, businesses, medical, community, and social services	X	X	X	X	X	X			X	X	X	X	X
X	X	X		X	X	Mental health services under normal conditions and post-event behavioral health management and monitoring	X		X	X	X	X	X				X	X	X
X	X	X	X	X	X	Environmental health management		X	X		X	X	X	X			X	X	X
	X		X	X	X	Decontamination of structures, assets, soil, and water		X	X			X	X	X	X	X		X	X
	X		X	X	X	Management of non-governmental support and volunteers	X		X	X	X	X	X	X	X			X	X
	X	X			X	Financial resources for public and private sector restoration	X		X	X								X	X
	X				X	Long-term healthcare facility restoration	X	X	X	X						X		X	X
	X		X	X	X	Damage assessment	X		X	X			X		X	X		X	X
	X		X	X	X	Telemedicine capabilities	X		X	X	X	X						X	X
	X		X	X	X	Debris removal and disposal	X	X	X	X					X	X		X	X
	X			X	X	Medical waste management	X	X	X					X		X		X	X
X	X	X	X	X	X	Continuous and sustainable process and strategy for community, organizational, and individual health resilience improvement	X	X	X	X	X	X	X	X	X	X	X	X	X
X	X	X	X	X	X	Health resilience assessment and measurement approaches for facilities, assets, and communities	X	X	X	X	X	X	X	X					X

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1   Community Health Resilience at a Glance

FOCUS AREAS	FOCUS AREA DESCRIPTION	EXAMPLES OF NEEDS AND CAPABILITIES
Healthcare and Related Public Health and Emergency Preparedness Plans and Resources	Needs and capabilities to assure hospitals and other healthcare providers and their suppliers, and public health professionals, effectively meet public health and safety needs under normal and emergency conditions, and are able to resume operations expeditiously if disrupted.	Medical surge plans and procedures (including pediatric surge) Assured availability and distribution of pharmaceuticals, medical, and other materials Availability/continuity of essential services (e.g., power and fuel, backup generators, ambulances) Critical vendor availability and access Healthcare-facility-related public safety and security issues (procedures, personnel) Access to personal protective and other equipment Alternative care facilities Effective preparedness plans Mutual assistance agreements Supplier and vendor contracts Patient movement and tracking system Prioritized distribution of vaccinations/anti-virals (plans, procedures, training) Availability of medical/hygiene supplies Lab analysis capabilities Volunteer medical and mental health personnel (training and certification)

FOCUS AREAS	FOCUS AREA DESCRIPTION	EXAMPLES OF NEEDS AND CAPABILITIES
Critical Infrastructure and Associated Interdependencies, Risk Assessment, and Mitigation	Needs and capabilities that provide awareness and understanding of all-hazards threats and related infrastructure dependencies and interdependencies, vulnerabilities, and consequences; identify gaps and provide insights into how to best mitigate or acquire needed resources to improve resilience.	All hazards assessments of impacts to interdependent infrastructures under different scenarios Identification and assessment of interdependencies-related vulnerabilities and preparedness gaps Identification, prioritization, and GIS mapping of government and infrastructure critical assets Information-sharing procedures, including ensuring confidentially of proprietary and data Identification and prioritization of potential mitigation measures
Coordination and Collaboration across Jurisdictions, Sectors, and Disciplines	Needs and capabilities to engage and empower key stakeholder organizations and individuals to build and sustain the collaborative environment and mechanisms necessary for community health resilience.	Factors that promote—and impede collaboration Identification of "whole community" stakeholders Approaches and models for creation or strengthening of cooperative mechanisms to foster coordination and collaboration, including public/private partnerships Workshops and exercises as tools for relationship building
Communications, Critical IT Systems, Information Sharing, and Health Data	Needs and capabilities to assure: • Effective, secure, and continued functioning of cyber and virtual systems that enable operation of critical infrastructures, including healthcare systems and essential communications services • Resumption of these systems and services if disrupted.	Protection and resilience supervisory control and acquisition systems and process control, and business systems Alert and warning/notifications (including pubic messaging on health issues) Awareness of, and information-sharing on cyber threats and attacks Healthcare/public health communications Public health messaging to eldercare facilities and other institutions with significant populations Data collection and dissemination Availability of patient health data Health IT systems reliability, resilience, and security HIPAA restrictions on individual health information

FOCUS AREAS	FOCUS AREA DESCRIPTION	EXAMPLES OF NEEDS AND CAPABILITIES
Continuity of Business and Operations and Supply Chain Management	Needs and capabilities to assure the continued operation of businesses, government, and other organizations, including the suppliers of goods and services on which these organizations depend, and to assist in the resumption of operations.	Economic consequences of different scenarios Identification of essential operations and activities Assessment of potential disruptions to services, including supply chains, and identification of potential mitigation Workforce policy issues that affect resilience, including employee family needs and telecommuting) Involvement of businesses in community or regional preparedness activities, including business continuity associations and representation in jurisdictional emergency operations centers Training of employees and testing through exercises of continuity plans and procedures
Response Challenges	Needs and capabilities required for a community, organization, or individual to effectively mobilize, organize, and manage all-hazards emergencies from single-point failures to major regional disasters.	Incident management/unified command/area command Delineation of roles, missions, and authorities Creation and management of points-of-distribution for food, water, and other essential supplies Identification and acquisition of resources, including volunteer management Security for vaccine distribution in transit and for dispensing organizations and for grocery stores and pharmacies Mutual aid agreements Availability of emergency managers and first responders Evacuation and mass care Temporary sheltering (including resource requirements and management) Assuring emergency fuel availability Certification of essential employees

FOCUS AREAS	FOCUS AREA DESCRIPTION	EXAMPLES OF NEEDS AND CAPABILITIES
Recovery and Long-Term Restoration Issues	Needs and capabilities required for pre-event preparedness and mitigation actions to facilitate disaster recovery and to meet the broad range of immediate and longer-term recovery/restoration challenges, including rebuilding for resilience.	Restoration plans and procedures Restoration management structure—what organizations and how they are organized, roles, and missions Decision-making for prioritized lifelines service restoration Debris and hazardous waste removal Resource requirements and management Long-term temporary housing for displaced individuals Rebuilding issues (e.g., land use, siting issues, and building back resiliency) Restoration lessons learned and model approaches
Human Factors, Including Physical and Mental Health and Related Community, Family, and Individual Issues	Needs and capabilities required to effectively address the health, safety, and well-being of individuals, families, at-risk individuals of all types, and the broader community in normal conditions, in emergency situations, and post-disaster.	Understanding and dealing with psychological impacts of affected individuals Addressing need of at-risk populations (elderly, disabled, economically disadvantaged, children, pregnant women) and ethnic and cultural groups Identifying and meeting family assistance needs Resilience for education and academic institutions, eldercare facilities, community centers, and daycare centers

FOCUS AREAS	FOCUS AREA DESCRIPTION	EXAMPLES OF NEEDS AND CAPABILITIES
Environmental Health and Food, Agriculture, and Veterinary Medicine	Needs and capabilities required to address all-hazards threats impacting: • Animal health and agriculture, including the food supply • The environment, including health threats associated with hazardous materials.	Screening, search, and detection for all-hazards health threats, including chemical, biological, radiological, nuclear, and explosives Animal and agricultural diseases and other hazards (natural and deliberate) Animal health issues, disease surveillance, and investigation and response Availability of veterinarians and staff during emergencies Plans/procedures to address pets, livestock (living and dead), and service animals during and post-disaster Agriculture surveillance and food safety/security (from source to consumer) HAZMAT site identification, characterization, monitoring, and risk assessment Hazardous material removal, including bio-waste Protective HAZMAT equipment
Legal, Policy, and Liability Issues	Needs and capabilities to gain: • Understanding of Federal, State, and local policies and regulations that facilitate individual or organizational resilience and security, or which may complicate, delay or impede mitigation or effective response and rapid recovery • Information on work-arounds, and other means to address legal and regulatory constraints.	For government agencies and for businesses Workplace-related contractual and human resource/personnel issues (e.g., compensation and leave policies for emergencies; workplace safety) Infrastructure sector-related regulatory issues (energy, transportation, water/wastewater, etc.) Information from/coordination with Federal, State, and local regulators Privacy and ethical issues Environmental, health, and safety-related policies and regulations Types of waivers and how to obtain them Volunteerism issues, including health worker and other professional certification requirements Liability associated with vaccine distribution and administering

FOCUS AREAS	FOCUS AREA DESCRIPTION	EXAMPLES OF NEEDS AND CAPABILITIES
Public Engagement, Empowerment, and Information, Including Media	Needs and capabilities to enable: • Stakeholders to work together to identify how to improve the resilience of their community • Utilization of social and traditional media to reach out to individuals and stakeholders on the importance of resilience, help build collaborative networks, and provide needed information before, during, and after a disaster or incident.	Plans/procedures and mechanisms for coordinating cross-jurisdiction public health and other emergency information Determination of what information to convey Regional coordination process and model mechanisms Plans for maintaining public confidence Outreach to groups servicing at-risk populations, cultural and faith-based groups Public messaging through: – Social media – Traditional media – Personal contacts
Education, Training, and Exercises	Needs and capabilities to raise awareness and educate individuals, groups, and organizations on all-hazards threats, vulnerabilities, and consequences, and help them improve preparedness and resilience through testing plans, procedures, and developing or enhancing capabilities to address readiness shortfalls.	Non-profit groups that provide disaster preparedness training Community and neighborhood preparedness programs (model approaches and processes) Tools and approaches for educating the general population on threats, risks, and preparedness actions Training on emergency plans and procedures Exercises to raise awareness of threats and impacts to interdependent infrastructures Targeted workshops and exercises to examine issues and test plans and equipment Regional interdependencies exercises to raise awareness of vulnerabilities and consequences Inclusion of health clinics, human care, eldercare facilities in workshops and exercises

FOCUS AREAS	FOCUS AREA DESCRIPTION	EXAMPLES OF NEEDS AND CAPABILITIES
Financial and Broader Resourcing Challenges	Needs and capabilities to provide individuals, businesses, local government agencies, community institutions, and non-profits information, guidance, and access to resources for preparedness and resilience improvements, pre-event mitigation, rebuilding, and reimbursements/loans to cover disaster-related costs.	Financial and technical resources from Federal, State, and local agencies Guidelines and procedures for receiving public assistance post-disaster Private sector disaster recovery financial challenges and avenues for assistance Potential sources of funding for CHR improvement activities Model mechanisms for financing pre-event mitigation activities and meeting post-event recovery resource needs

Community Health Resilience Initiative Stakeholder Group Organizations

Hospitals and Health Associations
American Academy of Disaster Medicine
American College of Obstetricians & Gynecologists
American Red Cross
Association of Public Health Laboratories
Association of State and Territorial Health Officials (ASTHO)
California Hospital Association
Children's Hospital & Research Center at Oakland
Kaiser Permanente
National Association of Community Health Centers
National Association of County and City Health Officials (NACCHO)

Other Professional Associations
American Institute of Architects
InfraGard EMP Special Interest Group
National Health Information Sharing and Analysis Center (NH-ISAC)
National Sheriff's Association

Non-Profit Organizations
Ashoka
Bay Area Center for Regional Disaster Resilience
Disaster Logistics Relief Ltd.
Meridian Institute
Pacific NorthWest Border Health Alliance
Pacific NorthWest Economic Region (PNWER)
RAND Corporation
San Francisco Community Agencies Responding to Disaster (SF CARD)
The Infrastructure Security Partnership (TISP)
U.S. Resilience System, Lehigh Valley Pennsylvania Resilience Network

Private Sector Organizations
Advanced Security Engineering Corp.
Dutko Worldwide
Emergency Response Design Group
Marton Technologies
McKesson Corporation
Obsidian Analysis, Inc.
Siren GPS
Target Corporation
The Scalingi Group, LLC
Willow, LLC
World Disaster Management, LLC

Universities
Drexel University School of Public Health
Fordham University Graduate School of Business
George Washington University
Johns Hopkins University Applied Physics Laboratory
Stanford Geriatric Education Center
University of California, Irvine
University of Louisville Pandemic Response Study
University of Maryland School of Public Health
Walden University

Healthcare Systems
CHRISTUS Health
Denver Health
Health Alliance
INOVA Health System
Optima Health
Scripps Health

Federally Funded Research and Development Centers (FFRDCs)
Argonne National Laboratory, Infrastructure Assurance Center
Homeland Security Institute

Federal Government

U.S. Department of Defense
- Office of the Assistant Secretary of Defense for Homeland Defense
- North American Aerospace Defense Command (NORAD)/U.S. Northern Command (NORTHCOM)
- Uniformed Services University of the Health Sciences, Center for Disaster Medicine and Humanitarian Assistance

U.S. Department of Health and Human Services
- Administration for Children and Families
- Assistant Secretary for Preparedness and Response
  - Division for At-Risk Individuals, Behavioral Health, and Community Resilience (ABC)
  - Critical Infrastructure Protection Program
- Centers for Disease Control and Prevention
  - Division of Strategic National Stockpile
  - Office of Public Health Preparedness and Response
- NIH/National Institute of Environmental Health Sciences (NIEHS)
- Substance Abuse and Mental Health Services Administration (SAMHSA)
- U.S. Public Health Service

U.S. Department of Homeland Security
- Federal Emergency Management Agency
- Office of Health Affairs

U.S. Department of Veterans Affairs
- Greater Los Angeles Healthcare System

U.S. Global Health Initiative

State/Local Government

Broward County (FL) Health Department

City of Chicago (IL) Department of Public Health

Colorado Department of Public Health and Environment

Connecticut Department of Public Health

County of San Diego (CA) Office of Emergency Services

Delaware Division of Public Health

District of Columbia Department of Health

Florida Department of Health, Bureau of Preparedness and Response

Missouri Department of Health

New Jersey Office of Homeland Security and Preparedness

Oklahoma Department of Environmental Quality

Oregon Health Authority

South Carolina Department of Health and Environmental Control

Washington State
- Department of Agriculture
- Department of Ecology

Westchester County (NY) Department of Social Services

Wisconsin Emergency Management

1 Abbreviations

ACF	Administration for Children and Families	**MRC**	Medical Reserve Corps
AHRQ	Agency for Healthcare Research and Quality	**NAHERC**	National Animal Health Emergency Response Corps
AOA	Administration on Aging		
ASL	Assistant Secretary for Legislation	**NAPAPI**	North American Plan for Avian and Pandemic Influenza
ASPA	Assistant Secretary for Public Affairs		
ASPE	Assistant Secretary for Planning and Evaluation	**NBSHH**	National Biosurveillance Strategy for Human Health
ASPR	Assistant Secretary for Preparedness and Response		
BARDA	Biomedical Advanced Research and Development Authority	**NCDMPH**	National Center for Disaster Medicine and Public Health
CBRNE	Chemical, biological, radiological, nuclear, and high-yield explosives	**NDMS**	National Disaster Medical System
		NEHA	U.S. National Environment Health Association
CDC	Centers for Disease Control and Prevention	**NHSS**	National Health Security Strategy
CFBNP	Center for Faith-Based and Neighborhood Partnerships	**NHTSA**	National Highway Traffic Safety Administration
		NIH	National Institutes of Health
CMS	Centers for Medicare and Medicaid Services	**NIMS**	National Incident Management System
DHS	U.S. Department of Homeland Security	**NIPP**	National Infrastructure Protection Plan
DOD	U.S. Department of Defense	**NRC**	National Research Council or Nuclear Regulatory Commission
DOE	U.S. Department of Education		
DOI	U.S. Department of Interior	**NSS**	National Security Strategy
DOJ	U.S. Department of Justice	**NVAC**	National Vaccine Advisory Committee
DOL	U.S. Department of Labor	**OCR**	Office for Civil Rights
DOS	U.S. Department of State	**OASH**	Office of Assistant Secretary of Health
DOT	U.S. Department of Transportation	**OD**	Office on Disability
EMS	Emergency Medical Services	**ODNI**	Office of the Director of National Intelligence
EPA	U.S. Environmental Protection Agency	**OGA**	Office of Global Affairs
ESAR-VHP	Emergency System for Advance Registration of Volunteer Health Professionals	**ONC**	Office of the National Coordinator for Health Information Technology
EUA	Emergency Use Authorization	**OSG**	Office of the Surgeon General
FCC	Federal Communications Commission	**OSSI**	Office of Security and Strategic Information
FDA	U.S. Food and Drug Administration	**OSTP**	Office of Science and Technology Policy
FEMA	Federal Emergency Management Agency	**OCVMRC**	Office of the Civilian Volunteer Medical Reserve Corps
FETIG	Federal Education and Training Interagency Group		
FIPP	Fair Information Practice Principles	**PAHPA**	Pandemic and All Hazards Preparedness Act
FSMB	Federation of State Medical Boards	**PHEMCE**	Public Health Emergency Medical Countermeasures Enterprise
GHSI	Global Health Security Initiative		
GIS	Geographic Information System	**PHERRB**	Public Health Emergency Research Review Board
HHS	U.S. Department of Health and Human Services	**QHSR**	Quadrennial Homeland Security Review
HIPAA	Health Insurance Portability and Accountability Act	**SAMSHA**	Substance Abuse and Mental Health Services Administration
HRSA	Health Resources and Services Administration		
ICS	Incident Command System	**SCIP**	Statewide Communication Interoperability Plan
IGA	Intergovernmental Affairs	**SLEP**	Shelf Life Extension Program
IHR	International Health Regulations	**SNS**	Strategic National Stockpile
HIS	Indian Health Service	**UPMC**	University of Pittsburgh Medical Center
IIG	Interim Implementation Guide (NHSS)	**USAID**	U.S. Agency for International Development
IRB	Institutional Review Board	**USDA**	U.S. Department of Agriculture
LIMS	Laboratory Information Management Systems	**VA**	U.S. Department of Veterans Affairs
MCM	Medical Countermeasures	**WHO**	World Health Organization
MCMI	Medical Countermeasures Initiative		

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1   Useful Terms

ALL-HAZARDS	An event, natural or manmade, that warrants action to protect life, property, the environment, and public health or safety, and to minimize disruptions of government, social, or economic activities.
AT-RISK INDIVIDUALS	Term applied to those individuals who may have additional needs in one or more of the following functional areas: communication, medical care, maintaining independence, supervision, and transportation. In addition to children, senior citizens, and pregnant women, individuals who may need additional response assistance include those who have disabilities, live in institutionalized settings, are from diverse cultures, have limited English proficiency or are non-English-speaking, are transportation disadvantaged, have chronic medical disorders, and have pharmacological dependency.
BIOSAFETY	Development and implementation of administrative policies, work practices, facility design, and safety equipment to prevent the transmission of biologic agents to workers, other persons, and the environment.
BIOSECURITY	The safe management of infectious materials to protect against loss, theft, diversion, or intentional misuse of microbiological pathogens.
CAPABILITY	Provides the means to accomplish a mission or function resulting from the performance of one or more critical tasks, under specified conditions, to target levels of performance. A capability may be delivered with any combination of properly planned, organized, equipped, trained, and exercised personnel that achieves the desired outcome.
COMMUNITY	Defined not simply in terms of geography and can refer to a neighborhood, a jurisdiction, or multiple jurisdictions, and includes individuals and their families; private-sector, nongovernmental, and academic organizations; and all forms of government (i.e., local, State, territorial, tribal, and Federal).
CONTINUUM OF HEALTHCARE	The full range of healthcare organizations and healthcare delivery settings relevant to national health security, including, but not limited to, 9-1-1 call centers/public safety answering points, EMS, emergency departments, hospitals, ambulatory care, physicians' offices, community health centers, specialized care (e.g., dialysis, laboratories, rehabilitation), behavioral healthcare, long-term care (e.g., nursing homes, assisted living), and home healthcare and services (e.g., nursing, meals).
CREDENTIALING	A means of identifying individuals who have demonstrated the ability to perform specific tasks or functions. The credentialing process entails the objective evaluation and documentation of an individual's current certification, license, or degree; training and experience; and competence or proficiency to meet nationally accepted standards, provide particular services and/or functions, or perform specific tasks under specific conditions during an incident.
CRISIS STANDARDS OF CARE	The conditions under which standards of care would change due to shortage of critical resources; crisis standards of care may be implemented following a substantial change in usual healthcare operations and the level of care it is possible to deliver, which is made necessary by a pervasive (e.g., pandemic influenza) or catastrophic (e.g., earthquake, hurricane) disaster.
CRITICAL INFRASTRUCTURE	The assets, systems, and networks, whether physical or virtual, so vital to the United States that their incapacitation or destruction would have a debilitating effect on security, national economic security, public health or safety, or any combination thereof.
DISASTER BEHAVIORAL HEALTH	The provision of mental health, substance abuse, and stress management services to disaster survivors and responders.

DUAL USE RESEARCH	The development of policies addressing life sciences research that yield information or technologies with the potential to be misused to threaten public health or national security.
ENVIRONMENTAL HAZARDS	Threats to food, water, air, soil, plant and animal safety and health, climate change, and occupational hazards.
EMERGENCY MEDICAL SERVICES SYSTEM	Any specific arrangement of emergency medical personnel, equipment, and supplies designed to function in a coordinated fashion. May be local, regional, State, or National.
EMERGING BIO THREAT	Emerging threats can be divided into two groups. The first are ones that began with a classic platform or agent, this is the weaponization of disease agents. The second group is composed of agents that do not exist in nature and are produced by man.
ENTERPRISE	A project or undertaking that is particularly difficult or risky. For example, the recently released Quadrennial Homeland Security Review (QHSR) refers to the "homeland security enterprise," which involves enhancing shared awareness of risks and threats, building capable communities, fostering unity of effort, and fostering innovative approaches and solutions through leading-edge science and technology.
FAIR INFORMATION PRACTICE PRINCIPLES	Guidelines from the U.S. Federal Trade Commission that represent widely accepted concepts concerning fair information practice in an electronic marketplace.
FOOD SAFETY	Protecting the food supply from microbial, chemical (i.e., arsenic, lead), and physical (i.e., glass, metal) hazards or contamination that may occur during all stages of food production and handling-growing, harvesting, processing, transporting, preparing, distributing, and storing. The goal of food safety monitoring is to keep food wholesome.
HEALTHCARE COALITION	A group of healthcare organizations working together to collectively leverage resources, thus increasing the scale of the response to meet the needs of their community. A healthcare coalition organizes individual healthcare assets into a single functional unit. A coalition may include hospitals, long-term care or alternative treatment facilities, dialysis and other outpatient treatment centers, nursing homes and other skilled nursing facilities, private physician offices, dental care, clinics, community health centers, and any other healthcare asset that may be brought to bear during major medical response. It can provide a central integration mechanism for cooperative planning, information sharing, and management coordination among healthcare assets, and also establishes a mechanism for integrating medical assets into the jurisdiction's incident command system.
HEALTHCARE DELIVERY SYSTEM	Includes primary and hospital care, disaster medicine, behavioral healthcare, and all other healthcare services
HEALTHCARE ORGANIZATION	Any type of entity that provides healthcare, including a private physician's office, dental office, hospital, long-term care or alternative treatment facility, dialysis or other outpatient treatment center, nursing home or other skilled nursing facility, clinic or other community health center, and any other healthcare asset that provides healthcare services.
HEALTH INCIDENT	Refers to a wide range of natural and manmade phenomena that may have health consequences that include, but are not limited to, infectious disease outbreaks, hurricanes, earthquakes, storms, tornadoes, tsunamis, hazardous material spills, nuclear accidents, biological and other terrorist attacks, and fires.

HEALTH LITERACY	Involves three dimensions: the basic knowledge needed to fully understand and take action on health issues (conceptual foundations), the skills necessary to make public health decisions that benefit the community (critical skills), and the skills and resources necessary to address health concerns through civic engagement (civic orientation).
HEALTH SECTOR	Includes all parts of the healthcare delivery system (e.g., primary and hospital care, disaster medicine, and behavioral healthcare) and the public health system.
HUMAN SERVICES	In the context of recovery, the term human services is intended to be compatible with the term social services as used in other national recovery documents.
INCIDENT COMMAND SYSTEM	A standardized on-scene emergency management construct specifically designed to provide an integrated organizational structure that reflects the complexity and demands of single or multiple incidents, without being hindered by jurisdictional boundaries. The ICS is the combination of facilities, equipment, personnel, procedures, and communications operating within a common organizational structure, designed to aid in the management of resources during incidents. It is used for all kinds of emergencies and is applicable to small as well as large and complex incidents. The ICS is used by various jurisdictions and functional agencies, both public and private, to organize field-level incident management operations.
JURISDICTION	A range or sphere of authority. Public agencies have jurisdiction at an incident related to their legal responsibilities and authority. Jurisdictional authority at an incident can be political or geographical (e.g., local, State, tribal, territorial, and Federal boundary lines) or functional (e.g., law enforcement, public health).
MEDICAL COUNTERMEASURES	Include those drugs, biological products, and devices that meet the definition of "qualified countermeasure," that the Secretary determines to be a priority (consistent with sections 302(2) and 304(a) of the Homeland Security Act of 2002) to—treat, identify, or prevent harm from any biological, chemical, radiological, or nuclear agent that may cause a public health emergency affecting national security or treat, identify, or prevent harm from a condition that may result in adverse health consequences or death, and may be caused by administering a drug, biological product, or device that is used [to treat, identify, or prevent harm from such an agent].
MEDICAL SURGE	The capability to rapidly expand the capacity of the existing healthcare system (long-term care facilities, community health agencies, acute care facilities, alternate care facilities and public health departments) in order to provide triage and subsequent medical care. This includes providing definitive care to individuals at the appropriate clinical level of care, within sufficient time to achieve recovery and minimize medical complications. The capability applies to an incident resulting in a number or type of patients that overwhelm the day-to-day acute-care medical capacity.
NATIONAL DISASTER MEDICAL SYSTEM	A coordinated effort by HHS, DHS, DOD, and VA, working in collaboration with the States and other appropriate public or private entities to provide health services, health-related social services, other appropriate human services, and appropriate auxiliary services to respond to the needs of victims of a public health emergency or be present at locations, and for limited periods of time, specified by the Secretary on the basis that the Secretary has determined that a location is at risk of a public health emergency during the time specified." Includes 112 Disaster Medical Assistance Teams, including Disaster Mortuary Assistance Teams, National Veterinary Response Teams, National Pharmaceutical Assistance Teams, and other related teams and assets. The NDMS is housed in HHS in the Office of the Assistant Secretary for Preparedness and Response.

NATIONAL HEALTH SECURITY	National health security exists when the Nation and its people are prepared for, protected from, and resilient in the face of health threats or incidents with potentially negative health consequences.
NATIONAL HEALTH SECURITY WORKFORCE	Encompasses paid staff and volunteer workers in public health and healthcare, as well as other disciplines such as pre-hospital EMS systems and emergency management.
NONTRADITIONAL PLANTS AND ANIMALS	Plants and animals are those that are not typically found in a region.
ONE HEALTH INITIATIVE	A movement to forge co-equal, all inclusive collaborations among physicians, veterinarians, and other scientific-health and environmentally related disciplines, including the American Medical Association, American Veterinary Medical Association, the American Society of Tropical Medicine and Hygiene, the CDC, the USDA, and the NEHA.
PAHPA	Pandemic and All Hazards Preparedness Act, Public Law No. 109-417.
PLANNING ALLIANCE	An alliance that establishes a systematic process for integrating and coordinating local, State, tribal, territorial, and Federal medical responses to support optimal surge capacity and capability while protecting patients, healthcare staff, and other health security workers.
PUBLIC HEALTH	"The science and practice of protecting and improving the overall health of the community through disease prevention and early diagnosis control of communicable diseases, health education, injury prevention, sanitation, and protection from environmental hazards.
RSS	Really Simple Syndication (RSS), a web feed technology used to publish works such as blog entries, news headlines, audio, and video that are frequently updated. GeoRSS is an emerging standard for encoding location as part of a web feed.
RISK ANALYSIS	The process of assessment and management of risks.
SITUATIONAL AWARENESS	The ability to identify, process, and comprehend the critical elements of information about an incident.
SOCIAL CONNECTEDNESS	The personal (e.g., family, friend, neighbor) and professional (e.g., service provider, community leader) relationships among community residents.
SURGE CAPACITY	A measurable representation of a healthcare system's ability to manage a sudden or rapidly progressive influx of patients within the currently available resources at a given point in time.
VOLUNTEER	Includes both people who are (1) associated formally with the system (e.g., register as part of a reserve workforce, train in functional roles with staff or other volunteers, and participate on an interim basis), and (2) ad hoc (e.g., feel compelled to help other workers prior to, during or following an incident and, in some response instances, require just-in-time training).
ZOONOTIC INFECTIONS	Any disease or infection that is naturally transmissible from vertebrate animals to humans and vice versa is classified as a zoonosis.

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